

This is clearly unlike either *Sekine et al.* or *Miyakawa et al.*, neither of which discloses or suggests a single image-capturing means that has a plurality of image-capturing regions, wherein each set of lenses and reflections means corresponds to a different one of the image-capturing regions. Unlike Applicant's claims 1, 2, and 7, *Sekine et al.* discloses two CCD devices each with one image capturing region, and *Miyakawa et al.* discloses a one camera with only one image capturing region. *Ishihara* and *Tabata et al.* also fail to disclose or suggest a single image-capturing means that has a plurality of image-capturing regions, wherein each set of lenses and reflections means corresponds to a different one of the image-capturing regions. Accordingly, none of the cited references, taken singly or in combination, could disclose or suggest Applicant's claims 1, 2, and 7.

Claims 3-6 depend directly or indirectly from claims 1, 2, or 7 and are therefore allowable for at least the same reasons that claims 1, 2, and 7 are allowable.

Applicant respectfully submits that the rejections of the Final Office Action of May 13, 2002 have been overcome and requests that they be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-7 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,


(Reg. No. 45,034)
Christopher P. Rauch
SONNENSCHEIN, NATH & ROSENTHAL
P.O. Box #061080
Wacker Drive Station - Sears Tower
Chicago, IL 60606-1080
Telephone 312/876-2606
Customer #26263
Attorneys for Applicant(s)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend claims 1, 2, and 7 as follows:

1. (Twice Amended) A three-dimensional image-capturing apparatus comprising: a single image-capturing device having a plurality of image capturing regions; and a plurality of optical systems for forming images of a subject in the image-capturing regions, each one of the optical systems corresponding to a different one of the image-capturing regions, the optical systems including a plurality of reflection means for reflecting rays from said subject a number of times, and at least a lens provided to be closer to said single image-capturing device than the closest reflection means to said subject among the reflection means; wherein the reflection means and the [lens] lenses of the optical systems are used to form, in the corresponding image-capturing regions, separate images of said subject which are captured from different viewpoints having a distance therebetween.

2. (Three Times Amended) A three-dimensional image-capturing apparatus comprising:
a single image-capturing device;
a plurality of imaging-side reflection means having reflectors provided to be obliquely outward, each one of the imaging-side reflection means corresponding to one of [for] a plurality of different portions of an image-capturing region of said single image-capturing device;
a plurality of subject-side reflection means having reflectors provided[, for the imaging-side reflection means,] outer from the imaging side reflection means so as to be oblique with respect to a subject, each one of the subject-side reflection means corresponding to a different one of the imaging-side reflection means, the subject-side reflection means reflecting rays from said subject to the corresponding imaging-side reflection means;
a plurality of lenses or lens units provided to be closer to said single image-capturing device than the subject-side reflection means in optical paths formed from said subject to the different portions of the image-capturing region so that rays from said subject to the different portions of the image-capturing region are reflected by the imaging-side reflection means through the lenses or lens units, each one of the lens or lens unit corresponding to a different one of the different portions of the image-capturing region, the lenses or lens units forming a plurality of images of said subject which have parallax; and
a plurality of diaphragms, each one of the diaphragms corresponding to a different one of the lenses or lens units, in which when each optical path has a lens, the diaphragms are provided to be closer to said subject than the corresponding lens and in which when each optical path has a lens unit, the diaphragms are provided to be closer to said subject than a lens of the corresponding lens unit.

7. (Twice Amended) A stereo-camera recording/reproducing systems comprising:

 a three-dimensional image-capturing apparatus comprising a single image-capturing device having a plurality of image-capturing regions and a plurality of optical systems, each one of the optical systems for forming [images] an image of a subject in [the] a different corresponding one of the image-capturing regions;

 a timing generator for driving said three-dimensional image-capturing apparatus so as to output the images formed in the image-capturing regions in the form of a single video signal;

 a driver;

 a camera signal processor for implementing camera signal processing on the single video signal;

 a signal recorder for recording, on a single recording medium, the processed video signal output from said camera signal process;

 a single reproducer for reproducing the video signal recorded on the recording medium;

 a video separating circuit for separating the reproduced video signal from the reproducer into signals corresponding to the image-capturing regions; and

 display apparatus for displaying the signals corresponding to the image-capturing regions, which are output from said video separating circuit;

 wherein the optical systems include a plurality of reflection means for reflecting rays from said subject a number of times and at least a lens provided to be closer to said image capturing device than the reflection means closest to said subject, each one of the reflection means corresponding to a different one of the image-capturing regions, and

 wherein the reflection means and the [lens] lenses are used to form, in the corresponding image-capturing regions, separate images of said subject which are captured from different viewpoints having a distance therebetween.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited as First Class Mail in an envelope addressed to Asst. Commissioner for Patents, Washington, D.C. 20231 on October 14, 2002.

Christopher P. Rauch (Reg. No. 45,034)
Christopher P. Rauch